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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,199	09/24/2001	Mitsuaki Yamamoto	213966US0PCT	6427

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EXAMINER	
FOSTER, CHRISTINE E	

ART UNIT	PAPER NUMBER
1641	

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,199	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Christine Foster	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-61* is/are pending in the application.

4a) Of the above claim(s) *33-39,41-43 and 46-61* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31,32,40,44 and 45* is/are rejected.

7)☒ Claim(s) *31 and 40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment, filed 12/5/05 is acknowledged and has been entered.

Election/Restrictions

2. Applicant's election of the species of **saponins** and specifically the compound **digitonin** as the species of compound having stronger affinity with any lipoproteins except HDL in the reply filed on February 13, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 33-39, 41-43, and 65 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claims 31-61 are pending in the application, with claims 31-32, 40, and 44-45 currently under examination.

Applicant has requested that the method claims be rejoined under the provisions of MPEP § 821.04. The withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. Since the product claim is not in condition for allowance, the process claims have not been rejoined at this time.

Rejections Withdrawn

4. The rejection of claim 18 under 35 USC 112, first paragraph, 35 USC 102(b), and 35 USC 102(e) and the objection to this claim are withdrawn in response to the cancellation of claim 18.

5. The rejection of claim 18 under the judicially-created doctrine of obvious-type double patenting is withdrawn in response to the cancellation of claim 18.

Specification

6. The amendment filed 12/5/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the abstract recites a compound having stronger affinity with any lipoproteins except HDL than with HDL, which represents a departure from the specification and claims as originally filed. The specification and claims as originally filed referred to a compound having a "relatively strong affinity" with "non-measuring lipoproteins" but did not state that the compound had stronger affinity with any lipoproteins except HDL than with HDL. The abstract also recites a surfactant exhibiting a stronger action on HDL than on the other lipoproteins. The specification and claims as originally filed referred to a surfactant exhibiting a "relatively strong action" on "measuring lipoproteins" but did not state that the surfactant exhibits a stronger action on HDL than on other lipoproteins.

Applicant is required to cancel the new matter in the reply to this Office Action.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

7. The disclosure is objected to because of the following informalities:

The specification lacks section headings listed above. For example, the heading "BRIEF SUMMARY OF THE INVENTION" is not present in the specification.

The word "first" is misspelled on p. 17, line 23 (see the replacement paragraph on p. 4 of Applicant's response filed 12/5/05). See also the previous Office action at pages 2 and 5.

The word "suzukacillin" is misspelled at p. 8, line 23 and in the replacement abstract.

The replacement abstract refers to "phospholipids derivatives", which should appear as "phospholipids derivatives".

The word "gramicidin" is misspelled in the replacement abstract.

Claim Objections

8. Claims 31 and 40 are objected to because of the following informalities:

The words "gramicidin" and "suzukacillin" are misspelled in claim 31.

Claim 31 recites "the phospholipids derivative", which should appear as "the phospholipid derivative" in the singular form.

Claim 40 recites a reagent according to claim 32, wherein "the saponins" are selected from digitonin and tomatine. The claim improperly refers to "the saponins" in the plural. It is suggested that claim 40 recite "the saponin is selected from the group...".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 31-32, 40, and 44-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Amended claim 31 recites a reagent that comprises the ingredients of a compound "having stronger affinity with any lipoproteins except HDL in a blood sample than with HDL" and a surfactant "exhibiting a stronger action on HDL than on the other lipoproteins", which represents a departure from the specification and claims as originally filed.

Applicant indicated that support for the amendment may be found in the specification and original claims and in particular at page 9, lines 2-8. However, the specification and claims as originally filed discloses a compound "having a relatively strong affinity with non-measuring lipoproteins in the sample" and to a surfactant exhibiting a "relatively strong action" on "measuring lipoproteins" or "other lipoproteins in the sample" (see original claim 18 and the specification at p. 4, line 26 to p. 5, line 5; p. 5, lines 11-18; p. 6, lines 15-21; p. 7, lines 7-24; p. 11, lines 18-23). This description differs from the claim language introduced by amendment and it is the Examiner's position that one skilled in the art would not find these descriptions to be synonymous. Support cannot be found for a compound having stronger affinity with any lipoproteins except HDL than with HDL, or for a surfactant having a stronger action on HDL than on other lipoproteins.

The passage at page 9, lines 2-8 discloses that:

> "A reaction mixture may become turbid when a sample containing lipoproteins is mixed with some of the above-mentioned selective affinity agents according to the conditions of reagent composition. This may be due to the production of aggregate of lipoproteins. However, aggregation of non-measuring lipoproteins is not indispensable in the present invention."

This passage does not describe a compound ("selective affinity agent") having stronger affinity with non-HDL lipoproteins or a surfactant having stronger action on HDL.

Although the specification discloses specific compounds such as digitonin, support cannot be found in the specification and claims as originally filed for their description as having stronger affinity with "lipoproteins except HDL" or for "**any** lipoproteins except HDL", or for a surfactant exhibiting a stronger action "on HDL than on the other lipoproteins". In addition, this description encompasses a genus of compounds that includes but is not limited to the specific compounds disclosed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 31-32, 40, and 44-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 31 recites the term "the other lipoproteins". There is insufficient antecedent basis for this limitation in the claims.

12. Claim 31 is rejected as vague and indefinite for the recitation of a "stronger action" because this terminology does not allow for the metes and bounds of the claims to be adequately identified. The term is not defined in the specification, and it is unclear what type of action(s) would be encompassed. See also the previous Office action at p. 9.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 32-33, 40, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasaki et al. (US 4,007,091).

Nagasaki et al. teach a reagent comprising digitonin, a nonionic surfactant (e.g., Triton X-100), and a cholesterol determination reagent (Liebermann-Burchard reagent, o-phthaladehyde reagent, or the enzyme cholesterol oxidase) (see in particular column 2, lines 40-49; column 3, line 55 to column 4, line 17; column 3, lines 41-58; and Example 1).

Nagasaki et al. do not identify the nonionic surfactants as those that exhibit "a stronger action on HDL than on other lipoproteins." However, Triton X-100 is an example of a suitable surfactant to be used according to the instant invention (see the specification at p. 10 and Examples 1-2), such that it would seem to inherently possess this property.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al. in view of Nakamura et al. (Japanese Patent Application Publication 09-313200, of record).

Nagasaki et al. is as discussed above, which teaches nonionic surfactants for the purpose of solubilizing and making transparent solutions that are to be subjected to determination of cholesterol (see column 3, line 25 to column 4, line 58). Nagasaki et al. teach polyoxyethylene alkyl phenol ethers and the polyoxyethylene isooctyl phenyl ether Triton X-100, but fail to specifically teach surfactants that are polyoxyalkylene alkylene phenyl ethers or polyoxyalkylene alkylene tribenzylphenyl ethers.

However, Nakamura et al. teach polyoxyalkylene alkylene phenyl ethers or polyoxyalkylene alkylene tribenzylphenyl ethers are used as surfactants in a method for determination of cholesterols in serum. Although these surfactants are not identified as surfactants exhibiting a stronger action on HDL than on other lipoproteins, they are disclosed as suitable surfactants according to the instant invention (p. 10), such that they would seem to inherently possess this property.

Therefore, it would have been obvious to one of ordinary skill in the art to employ polyoxyalkylene alkylene phenyl ethers or polyoxyalkylene alkylene tribenzylphenyl ethers in the reagent of Nagasaki et al. because Nakamura et al. teach that these are also known surfactants suitable for use as surface active agents in determining cholesterol, which is the purpose for which the non-ionic surfactant is used in Nagasaki et al. To employ known surfactants for their known surface-active properties and obtain the expected results would have been obvious. No criticality is seen or disclosed for the presently claimed selection of these particular surfactants. One would have a reasonable expectation of success because Nagasaki et al. do not exclude the surfactants of Nakamura et al. and indicate that many nonionic surfactants may be used (column 3, lines 55-59).

18. Claims 32-33, 40, and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (Japanese Patent Application JP 59-003261 A) in view of Nakamura et al. (Japanese Patent Application Publication 09-313200, of record).

Miyashita et al. is a Japanese language document. This rejection is being made over the English abstracts attached.

Miyashita et al. teach a reagent for determination of cholesterol in blood samples that comprises digitonin. Miyashita et al. further teach the reagents KOH solution, acetic acid, and ethanol, which are used for the purpose of measuring cholesterol such that they can be considered to constitute "cholesterol determination reagents". Miyashita et al. further teach a surfactant that is preferably non-ionic, which is added to disperse fine particles of digitonide formed through the reaction of cholesterol and digitonin.

The abstracts provided for the Miyashita et al. reference fail to specifically teach that the surfactant exhibits a stronger action on HDL than on other lipoproteins, or that the surfactant is a polyoxyethylene alkylene phenyl or tribenzylphenyl ether.

However, Nakamura et al. teach polyoxyalkylene alkylene phenyl ethers or polyoxyalkylene alkylene tribenzylphenyl ethers are used as surfactants in a method for determination of cholesterols in serum. Although these surfactants are not identified as surfactants exhibiting a stronger action on HDL than on other lipoproteins, they are disclosed as suitable surfactants according to the instant invention (p. 10), such that they would seem to inherently possess this property.

Therefore, it would have been obvious to one of ordinary skill in the art to employ polyoxyalkylene alkylene phenyl ethers or polyoxyalkylene alkylene tribenzylphenyl ethers in the reagent of Miyashita et al. because Nakamura et al. teach that these are also known surfactants suitable for use as surface active agents in determining cholesterol, which is the purpose for which the non-ionic surfactant is used in Miyashita et al. To employ known surfactants for their known surface-active properties and obtain the expected results would have been obvious. No criticality is seen or disclosed for the presently claimed selection of these particular surfactants. It is further noted that the surfactants of Nakamura et al. are not excluded by Miyashita et al., which teach "non-ionic" surfactants.

Response to Arguments

19. The rejections of claim 18 under 35 USC 102(b) as being anticipated by Pascal, Hino et al, Miki et al., and Nakamura et al. are withdrawn in response to Applicant's amendments. The

rejection of claim 18 under 35 USC 102(e) as being anticipated by Nakamura et al. (6,057,118) is also withdrawn in response to Applicant's amendments.

Conclusion

20. No claims are allowed.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Foster whose telephone number is (571) 272-8786. The examiner can normally be reached on M-F 8:30-5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached at (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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